CONTENTS INDEX - VOLUME 31

Steroid Hydroxylase Induction in Cultured Human Lymphocytes: Effects of the Menstrual Cycle. W.L. Mason, I.E. Muijsson-Arnold, M. McKenzie, E.T. Cantrell, and D.L. Busbee . . 2080 1

Polar Corticosteroids in Human Neonatal Urine; Synthesis and Gas Chromatography-Mass Spectrometry of Ring A Reduced 6-Hydroxylated Corticosteroids. H.J.G.M. Derks and N.M. Drayer . . 2081 . . . 9

Thermal Transformation of Cholecalciferol between 100-170°C. Bohumil Pelc and David H. Marshall . . 2115 23

Study of Complex Marine Sterol Mixtures by Mass-Analyzed Ion Kinetic Energy Spectrometry. A. Maquestiau, Y. Van Haverbeke, R. Flammang. H. Mispreuve, M. Kaisin, J.C. Braekman, D. Daloze, and B. Tursch . . 2121 31

Reactions of 4β,5-Epoxy-5β-Androstan-3-Ones with Hydrogen Fluoride in Pyridine. Bojan Hamlin Jennings and Joan Marie Bengtson . 2150. 49

Progesterone Receptor in the Rat Anterior Pituitary: Effect of Estrogen Priming and Adrenalectomy. Rawden W. Evans, Leon J. Sholiton, and Wendell W. Leavitt . . 2175 69

Further Characterization of the Effects of Hypophysectomy, FSH and Estrogen on LH Stimulation of Testosterone Production in Leydig Cells Isolated from Immature Rats. Wilma M.O. van Beurden, Bep Roodnat, Eppo Mulder, and Henk J. van der Molen . . 2184 83

Preparation and Characterization of (24R and 24S)-5β-Cholestane-3α, 7α,24,25-Tetrols and (24R and 24S)-5β-Cholestane-3α,24,25-Triols. A.K. Batta, B. Dayal, G.S. Tint, S. Shefer, V. Toome, G. Salen, and E.H. Mosbach . . 2185 99

Products of Dehydroepiandrosterone Metabolism by Human Mammary Tumors and their Influence on Estradiol Receptor Binding. Karen Li, T. Foo, and J.B. Adams . . 2189 113

Androgen Concentration and Partial Characterization of 5α Reductase in the Epididymis of the Rhesus Monkey. M.A. de Larminate and J.A. Blaquier . . 2195 129

Thin-Layer Chromatographic *in situ* Analysis of Insect Ecdysones via Fluorescence-Quenching. Richard T. Mayer and J.A. Svoboda.2212. 139

*In vitro*Liver Clearance of Tritiated Estradiol-17β in the Female Rat after Retrochiasmatic Transection and Ovariectomy. Charles H. Rodgers and Robert T. Chatterton, Jr. . . 2234 151

Color Reaction of Cholesterol with Trichloroacetic Acid and Antimony Trichloride. On the Reaction Mechanism. Yoshihisa Kurasawa, Atsushi Takada, and Takeo Ueda . . 2124 163

Time-Course Relationships between Serum LH, Serum Progesterone and Urinary Pregnanediol Concentrations in Normal Women. S.M. Judge, J.P. Quade, W.S.M. Arrata, and R.T. Chatterton, Jr. . . 2200 . . 175

Influence of Experimental Cryptorchidism on Cholesterol Side-Chain Cleavage Enzyme and Δ^5-3β-Hydroxysteroid Dehydrogenase Activities in Rat Testes. J.R. Wisner, Jr. and W.R. Gomes . . 2211 189

A Radioimmunoassay for Danazol (17α-Pregna-2,4-Dien-20-YNO[2,3-d] Isoxazol-17-OL). Tanya A. Williams, Jerome Edelson, and Richard W. Ross, Jr. . . 2214 205

Disulphates of 16-Oxygenated Ketonic C_{19} Steroids as Biliary Metabolites of Androsterone Sulphate in Female Rats. Michio Matsui and Misako Hakozaki . . 2215 219

Importance of Jejunum for Bile Acid Absorption in Pigeons: Effect of Jejunal Resection on Plasma Cholesterol and Cholesterol Excretion. M.T. Ravi Subbiah . . 2221 227

Testosterone Metabolites in Dog Bile. Y. Yamamoto, Y. Osawa, R.Y. Kirdani, and A.A. Sandberg . . 2228 233

Radioimmunoassay of 2-Hydroxyestrone. P. Ball, G. Emons, O. Haupt, H.-O. Hoppen, and R. Knuppen . . 2229 249

In vitro Conversion of 5α-Reduced Metabolites of Testosterone by the Seminal Vesicles, Ventral Prostate Glands and Testes of Adult Rats. Dwight W. Warren and Nazir Ahmad . . 2231 259

Progesterone in the Uterus X. Dependence of the *in vitro* Progesterone Metabolism on Progesterone Binding in Rat Uterus. Dieter Egert . . 2235 269

The Identification and Quantification of Three New 6α-Hydroxylated Corticosteroids in Human Neonatal Urine. H.J.G.M. Derks and N.M. Drayer . . 2251 289

Uptake and Metabolism of Androgens by Bovine Spermatozoa. O. Djöseland, S. Høglo, K. Nyberg, C.D. Hastings, and A. Attramadal . . 2128 307

Identification of Bile Alcohols in Normal Rabbit Bile. Michiko Murata, Taiju Kuramoto, and Takahiko Hoshita . . 2209 319

Identification of 5β-Cholestane-3α,7α,12α,23β-Tetrol, 5β-Cholestane-3α,7α,12α,24α-Tetrol, and 5β-Cholestane-3α,7α,12α,24β-Tetrol in Cerebrotendinous Xanthomatosis. Misao Yasuhara, Taiju Kuramoto, Takahiko Hoshita, Eiko Itoga, and Shozo Kito . . 2210 333

The Presence in Bovine Trachealis Muscle of Cytosol Receptors with High Affinity for Glucocorticoids. Terence E. Nicholas and Walter K. Morishige . . 2217 347

A Simple and Efficient Method for Raising Steroid Antibodies in Rabbits. Edward C. Dawson, Ad E.H.C. Denissen, and Bauke K. van Weemen . . 2227 357

Synthesis of Various 18-Substituted Progesterones. Rae Ann M. Auel, Robert W. Freerksen, and David S. Watt . . 2232 367

A Radioimmunoassay Method for Urinary Catechol Estrogens. Sati C. Chattoraj, Adel S. Fanous, Douglas Cecchini, and Ernest W. Lowe . . 2240 375

A Double-Antibody Radioimmunoassay for Serum Progesterone Using Progesterone-3-(O-Carboxymethyl)Oximino-[^{125}I]-Iodohistamine as Radioligand. Josef Z. Scott, Frank Z. Stanczyk, Uwe Goebelsmann, and Daniel R. Mishell, Jr. . . 2243 393

Direct Radioimmunoassay of Specific Urinary Estrogen Glucosiduronates in Normal Men and Nonpregnant Women. K. Wright, D.C. Collins, P.I. Musey, and J.R.K. Preedy . . 2246 407

An Exchange Assay for the Cytoplasmic Glucocorticoid Receptor in the Liver of the Rat. William Rosner and Susan T. Polimeni . . 2248 427

The Extrasplanchnic Origin of Blood Dihydrotestosterone in Elderly Men. T. Ishimaru, A. Edmiston, L. Pages, and R. Horton . . 2257 439

A New and Improved Synthesis of 19-Iodocholesterol 3-Acetate. Harry E. Hadd . . 2196 453

Failure of Breast Cancer Cells in Long-Term Culture to Aromatize Androstenedione. R. D'Agata, M.E. Monaco, M.E. Lippman, and D.L. Loriaux . . 2206 463

Metabolism of Diethylstilbestrol in the C3H Mouse: Chromatographic Systems for the Quantitative Analysis of DES Metabolic Products. E.D. Helton, B.J. Gough, J.W. King, Jr., J.P. Thenot, and E.C. Horning . . 2216 471

5α-Reductase and 3α-Hydroxysteroid Oxidoreductase Enzyme Activities in Epididymis and their Control by Androgen and the Rete Testis Fluid. André Pujol and Francis Bayard . . 2222 485

An Improved Synthesis of 6β-Hydroxy-5β-Pregnane-3,20-Dione. Rukhsana Chaudhri, George Cooley, and William F. Coulson . 2226. . 495

Identification of 7ξ-Hydroxytetrahydrocortisol and 7ξ-Hydroxytetrahydrocortisone from Urine of Newborn Baboons (*Papio papio*). Gerald J. Pepe and John D. Townsley . . 2239 501

Studies on the Effect of 5α-Androstane-3α,17α-Diol in the Canine Prostate *in vivo*. I.R. McDermott, C.H. Robinson, and D.P. DeKlerk . . 2256 511

A General Procedure for Estimation of Corticosteroid Response in Individual Rats. L.D. Keith, J.R. Winslow, and R.W. Reynolds . . 2259 523

Stabilization of Placental Aromatase by Dithiothreitol in the Presence of Oxidizing Agents. William G. Kelly and Ann H. Stol Ann H. Stolee . . 2262 533

Characterization of Unoccupied (R) and Occupied (RA) Androgen Binding Components of the Hyperplastic Human Prostate. Sydney A. Shain, Robert W. Boesel, Donald L. Lamm, and Ho Howard M. Radwin . . 2263 541

Steroidogenic Activity of hACTH and Related Peptides on the Human Neocortex and Fetal Adrenal Cortex in Organ Culture. C.T. Branchaud, C.G. Goodyer, C.St.G. Hall, J.S. Arato, R.E. Silman, and C.J.P. Giroud . . 2268 557

21-Hydroxypregna-1,4-Diene-3,11,20-Trione: A Biliary Metabolite of a Cartilaginous Fish, *RAJA SP*. B. Truscott, K.M. Kane, and D.R. Idler . . 2269 573

Separation of Estrogen Conjugates by High Pressure Liquid Chromatography. Musey, P.I., D.C. Collins, and J.R.K. Preedy . . 2271 . . 583

Participation of Propionate in Cholesterol Biosynthesis by Rat Liver. Roger A. Davis . . 2275 593

The Synthesis of 17-Substituted 2α-Chloro-5α-Androstan-3-Ols. Frankie Wong, Robert A. Mallory, Mary Lou Cotter, and Allen F. Hirsch . . 2201 605

Isolation of 15α-Hydroxypregnenolone and 15α-Hydroxydehydroisoandrosterone from Human Pregnancy Urine. Frank Z. Stanczyk, Michael Stern, and Samuel Solomon . . 2241 613

Formation of 15α-Hydroxyestriol and 15α-Hydroxyestradiol from C_{19} 15α-Hydroxylated Precursors in Human Pregnancy. Frank Z. Stanczyk and Samuel Solomon . . 2242 627

The Synthesis of 25-Hydroxycholecalciferol-23,23,24,24-t_4 of High Specific Activity. Richard R. Muccino, Gerald G. Vernice, Joseph Cupano, Eugene P. Oliveto, and Arnold A. Liebman . . 2250 . . . 645

Chromatographic Separation of Vitamin D_3 Sulfate and Vitamin D_3. Y. Sorgue and L. Miravet . . 2252 653

A Quantitative Gas-Liquid Chromatographic Method for the Estimation of Hecogenin and Tigogenin in the Leaves, Juice and Sapogenin Concentrates of *Agave Sisalana*. A.L. Cripps and G. Blunden . 2265. 661

Microbial Transformations of Natural Antitumor Agents. 7. 14-*Alpha*-Hydroxylation of Withaferin-A by *Cunninghamella Elegans* (NRRL 1393). John P. Rosazza, Allan W. Nicholas, and Mark E. Gustafson. 2274. 671

Solid Phase Method for Measurement of the Binding Capacity of Testosterone-Estradiol Binding Globulin in Human Serum. Bruce C. Nisula, D. Lynn Loriaux, and Yvonne A. Wilson . . 2276 681

A Radio-Gas Chromatographic Method for the Determination of 11-Oxotestosterone in Fish Plasma: Its Use in Confirming Estimations by Radioimmunoassay. T.H. Simpson and R.S. Wright . . 2278 . . 691

The Effects of Enzyme Concentration on the Kinetic Behavior of Adrenal 21-Hydroxylase and 11β-Hydroxylase in the Pregnant Rat. Thomas F. Ogle . . 2279 697

Androgen Metabolism in the Rhesus Monkey. Y. Yamamoto, A. Manyon, R.Y. Kirdani, and A.A. Sandberg . . 2281 711

Post Partum Patterns of Circulating FSH, LH, Prolactin, Estradiol, and Progesterone in Nonsuckling Cynomolgus Monkeys. Arnold L. Goodman and Gary D. Hodgen . . 2285 731

In Vitro Metabolism of Androgens by Mammalian Cauda Epididymal Spermatozoa. M. Rajalakshmi, J.T.S. Leask, and G.M.H. Waites . . 2202 747

Influence of Steroid Aerosol Treatments on the Clearance of Inhaled Gold Particles. John C. Elliott and Robert F. Phalen . . 2258 . . 761

The Effect of the Administration of Spironolactone on the Concentration of Plasma Testosterone, Estradiol and Cortisol in Male Dogs (1). Raymond H. Menard, D. Lynn Loriaux, Frederic C. Bartter, and James R. Gillette . . 2266 771

Solubilization and Partial Purification of Steroid Sulfatase of Human Placenta. R. Gauthier, N. Vigneault, G. Bleau, A. Chapdelaine, and K.D. Roberts . . 2284 783

Bile Acid and Cholesterol Excretion in the Pregnant Guinea Pig: Studies on the Hypercholesterolemia of Pregnancy. Job R. Li, Laurie K. Bale, and M.T. Ravi Subbiah . . 2288 799

Effect of Taurocholate on the Conversion of 3α, 7α, 12α-Trihydroxy-5β-Cholestan-26-OIC Acid into Cholic Acid. Russell F. Hanson and Gale C. Williams . . 2289 809

Minor and Trace Sterols in Marine Invertebrates V.* Isolation, Structure Elucidation and Synthesis of 3β-Hydroxy-26,27-Bisnorcholest-5-En-24-One from the Sponge *Psammaplysilla Purpurea*. Eser Ayanoglu, Carl Djerassi, Timothy R. Erdman, and Paul J. Scheuer . . 2291 . . 815

The Effect of Progesterone Analogues, Naturally Occurring Steroids, and Contraceptive Progestins on Hypothalamic and Anterior Pituitary Δ^4-Steroid (Progesterone) 5α-Reductase. James E. Krause and Harry J. Karavolas . . 2295 823

Stimulation by Estradiol Benzoate of Hepatic β-Hydroxy-β-Methylglutaryl Coenzyme A Reductase in Normal and Ovariectomized Rats. Y.J. Abul-Hajj . . 2298 841

The Suppressive Effect of the Catatoxic Steroid, Pregnenolone-16α-Carbonitrile, on Liver Microsomal Cholesterol-7α-Hydroxylase. J.I. Mason and G.S. Boyd . . 2306 849